

**Amendment to the Claims:**

This listing of claims will replace all prior versions and listings of claims in the application.

**Listing of Claims:**

1.- 12. (Canceled)

13. (New) A method for recovering a digital data signal ( $D_{out}$ ) and a clock signal ( $Ck_{out}$ ) comprising:

receiving a data signal including a plurality of successive bits;  
generating, from the data signal, the clock signal ( $Ck_{out}$ ) with a resonator circuit;  
phase locking the clock signal ( $Ck_{out}$ ) to the data signal by measuring a phase difference between the clock signal ( $Ck_{out}$ ) and the data signal and by time delaying the clock signal ( $Ck_{out}$ ) in response to the phase difference;  
sampling the data signal at approximately the center of each bit with the clock signal ( $Ck_{out}$ ); and  
generating, as a result of the sampling, the digital data signal ( $D_{out}$ ).

14. (New) The method of claim 13, delaying the clock signal ( $Ck_{out}$ ) further comprising:  
generating a first steering signal based on the phase difference between the clock signal ( $Ck_{out}$ ) and the data signal; and  
controlling, with the first steering signal, a controlled delay unit.

15. (New) The method of claim 13 further comprising:

generating a second steering signal based on the frequency difference between the clock signal ( $Ck_{out}$ ) and an output signal from the resonator circuit;

controlling, with the second steering signal, a controlled oscillator in a frequency locked loop; and

frequency locking the clock signal ( $Ck_{out}$ ) to the output of the resonator circuit.

16. (New) The method of claim 15 further comprising:

filtering the first steering signal with a first low pass filter; and

filtering the second steering signal with a second low pass filter.

17. (New) The method of claim 16 wherein a cut-off frequency of the first low pass filter is approximately 10 to 20 times smaller than the cut-off frequency of the second low pass filter.

18. (New) The method of claim 16 wherein a cut-off frequency of the first low pass filter is between 1 KHz and 50 KHz and a cut-off frequency of the second low pass filter is between 40 KHz and 2 MHz.

19. (New) The method of claim 13 wherein a data rate of the data signal is 622 MHz, 2.5 GHz, or 10 GHz.

20. (New) A circuit to recover a digital data signal ( $D_{out}$ ) and a clock signal ( $Ck_{out}$ ) from a received data signal ( $D_{in}$ ), the received data signal ( $D_{in}$ ) including a plurality of successive bits, the circuit comprising:

- a resonator circuit to generate a clock signal from the received data signal ( $D_{in}$ ) and to generate the digital data signal ( $D_{out}$ ) by sampling the received data signal ( $D_{in}$ ) with the clock signal ( $Ck_{out}$ ),
- a phase detector to measure a phase difference between the clock signal ( $Ck_{out}$ ) and the received data signal ( $D_{in}$ ) and to phase lock the clock signal ( $Ck_{out}$ ) and the received data signal ( $D_{in}$ ) by time delaying the clock signal ( $Ck_{out}$ ) depending on the phase difference; and
- a controlled delay unit to delay the clock signal ( $Ck_{out}$ ) depending on the phase difference to sample the received data signal ( $D_{in}$ ) at approximately the center of each bit.

21. (New) The circuit of claim 20, the controlled delay unit to generate the time delay in response to a first steering signal, the first steering signal based on the phase difference between the clock signal ( $Ck_{out}$ ) and the received data signal ( $D_{in}$ )

22. (New) The circuit of claim 21 further comprising:

- a frequency locked loop to frequency lock the clock signal and an output of the resonator circuit, the frequency locked loop including a controlled oscillator, the controlled oscillator to respond to a second steering signal, wherein the second

steering signal is based on a frequency difference between the clock signal ( $Ck_{out}$ ) and an output signal from the resonator circuit.

23. (New) The circuit of claim 22 further comprising:

- a first low pass filter to filter the first steering signal; and
- a second low pass filter to filter the second steering signal.

24. (New) The circuit of claim 23 wherein a cut-off frequency of the first low pass filter is approximately 10 to 20 times smaller than the cut-off frequency of the second low pass filter.

25. (New) The circuit of claim 23 wherein a cut-off frequency of the first low pass filter is between 1 KHz and 50 KHz and a cut-off frequency of the second low pass filter is between 40 KHz and 2 MHz.